## BUTTERFLIES OF SIND

ВY

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The desert province of Sind, with its scanty rainfall, scorching summer temperatures, hot dry winds and dust, would appear to have little attraction for butterfly life. Nevertheless butterflies are to be found, at times sparsely, but often in large numbers even in such arid and unexpected places as on the stony hills near Tatta, in the sandy wastes of the Thar Desert and along the desolate frontiers of Upper Sind. The number of species is however very limited as this naturally depends on the lepidopterous fauna available. For this reason the Lloyd Barrage and its extensive network of perennial canals which commenced operating in 1932 have up to now had practically no effect on the butterfly life beyond slightly extending the range of a few species, because although hundreds of thousands of acres of rice, cotton, wheat, etc. are cultivated annually in the canal zone such seasonal crops afford little or nothing in the form of food plants for the butterfly larvae. Consequently they have to depend mainly on the natural vegetation of the country, which itself is limited both in extent and variety. The principal larval food plants are thus provided by the babul (Acacia arabica), ber (Zizyphus jujuba), ak (Calotropis procera), kirir (Capparis decidua), kandera (Alhagi camelorum), khabbar (Salvadora persica), and other natural desert vegetation. Larval food plants are also available in the flower gardens of Karachi and in the cultivated citrus groves found scattered about the canal zone. Also by the occasional amaltas (Cassia fistula) and Bauhimia trees that have been planted at some of the canal inspection bungalows. No provincial list of the butterflies of Sind has previously been published and very little has been written on the subject. In the Sind Natural History Society's journals for October 1935 and 1936 respectively, C. J. Rae has described 'Some Karachi Butterflies' and 'Some common Sind Cold Weather Butterflies', but the main work still remains the 'List of Butterflies from Karachee' by Lt.-Col. Swinhoe, which appeared in the Proceedings of the Zoological Society of London, 1884, and which that author subsequently enlarged and rewrote in his article 'On the Lepidoptera of Karachi and its Neighbourhood ', published in the Journal of the Bombay Natural History, Society, Vol. II, No. 4 (October, 1887). In that article Swinhoe mentioned that due to the recent introduction of the Karachi Water Works gardens were springing up everywhere and all kinds of new trees were being cultivated, and he thought it possible that the list of Karachi butterflies might go on increasing every year with the growth of vegetation until it somewhat resembled that of Bombay. It is therefore interesting to note that this increase has not yet materialised and that now, after some 60 years, the list of Karachi species is still very similar to what it was in Swinhoe's days. The following provincial list has been prepared from observations made all

over Sind between 1932 and 1947, and for the purpose of this list the Lower-Upper Sind boundary has been taken as an east-west line through the town of Nawabshah. Examples of most species are met with moreor less throughout the year, but the best season is from July to November, and butterflies are particularly numerous in the occasional years of heavy summer rain. The notation followed is according to that givenby Brigadier W. H. Evans in his ' Identification of Indian Butterflies'.

1. Tros aristolochiae aristolochiae F. The Common Rose.

The form *diphilus* Esp. is not rare.

Karachi and Lower Sind. Common. Not noted in Upper Sind.

2. Papilio polytes romulus Cr. The Common Mormon.

Swinhoe does not include this in his final list although in his earlier list he had noted it as rare. It is now common in Karachi, rare in Lower Sind and has not yet extended its range north of Nawabshah.

The 2 forms that occur are romulus Cram. and cyrus Fabr.

3. Papilio demoleus demoleus L. The Lime Butterfly.

Common all the year round. The brownish-yellow insect is also common.<sup>1</sup>

4. Belenois mesentina mesentina Cr. The Pioneer.

Common and numerous.

5. Catopsilia crocale Cr. The Common Emigrant.

J form alcmeone (Cram).

9 form crocale (Cram).

The Emigrants are found throughout Sind, their numbers generally depending locally on the presence of amaltas and *Bauhinia* trees, which provide their principal larval food plant. Out of the four species that occur all except *pomona* F. are common.

6. Catopsilia pomona F. The Lemon Emigrant.

7. Catopsilia pyranthe minna Herbst. The Mottled Emigrant.

8. Catopsilia florella gnoma F.<sup>2</sup> The African Emigrant.

9. Terias laeta laeta Bdv. The Spotless Grass Yellow.

In his first list of Karachi butterflies Swinhoe has noted this as 'June. Rare', but in his final list states, 'A common insect at Karachi and very plentiful in May and June.' It is now scarce both in Karachi and in the rest of Sind.

10. Terias hecabe simulata M. The Common Grass Yellow.

This is the grass yellow met commonly everywhere. In order to ascertain whether T. h. fimbriata Wall occurred in Sind a series of grass yellows were taken at various places in different months of the year. All were identified by the B.N.H.S. and confirmed by Brig. Evans as simulata.

<sup>&</sup>lt;sup>1</sup> In the experience of Mr. M. A. Wynter Blyth these brownish-yellow insects are old examples whose coloration has been faded by the elements.—EDS.

<sup>&</sup>lt;sup>2</sup> Nos. 7 and 8 are now considered the wet season form and dry season form respectively of the same species. M.A.W-B.

# [11. Ixias pyrene satadra M. The Indian Orange-tip.

This is shown in the Identification of Indian Butterflies as occurring in Sind. Swinhoe does not record this insect nor did I ever come across it.]

12. Colotis amata amata F. The Small Salmon Arab.

The colotis group (except *protractus* and *fausta*) are found everywhere and are the commonest butterflies in the Province.

13. Colotis protractus But. The Blue Spotted Arab. Locally common throughout Sind.

14. Colotis vestalis But. The White Arab.

15. Colotis fausta fausta Oliv. The Large Salmon Arab.

Taken near Karachi, Dabeji, Oderolal and Sukkur. Rare.

16. Colotis etrida etrida Bdv. The Little Orange-tip.

17. Colotis danae dulcis But. The Crismon-tip.

18. Danais limniace mutina Fruh. The Blue Tiger.

Common in Karachi in July and August after rains. Scarce in the rest of Sind.

19. Danais plexippus L. The Common Tiger.

Occurs only in years of heavy rainfall. Entirely absent from 1938 onwards and then appeared in large numbers in Karachi from July to September, 1944, after abnormal rains.

20. Danais chrysippus L. The Plain Tiger.

One of the commonest butterflies in Sind, seen everywhere and in every month of the year. v. *alcippoides* M. and v. *dorippus* Cr. both occur.

21. Melanitis leda ismene Cr. The Common Evening Brown.

Karachi. Very rare. Swinhoe took one in 1879 and two in 1886.

22. Ypthima asterope mahratta M. The Common Threering.

Karachi. Very rare. Swinhoe records taking one in 1886. I did not come across this insect or M. *l. ismene* although constantly on the lookout during the past 15 years.

23. Hypolimnas bolina L. The Great Eggfly.

Karachi. Very rare. Swinhoe notes 2 specimens in 1882 and 2 in 1886. This insect and the two listed above now appear to be extinct.

24. Hypolimnas misippus L. The Danaid Eggfly.

Common in Karachi after heavy rain from July to December. Not common in Lower Sind. Not noted in Upper Sind.

25. Precis hierta hierta F. The Yellow Pansy.

The Yellow, Blue, and Peacock Pansies are common in most months of the year.

26. Precis orithya swinhoei But. The Blue Pansy.

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## 27. Precis lemonias vaisya Fruh. The Lemon Pansy.

Swinhoe took one in 1885 at Karachi.

In 1936 not uncommon near Jacobabad, but elsewhere in Sind I came across none until I took one in Karachi in 1942. Suddenly became numerous throughout Sind from October to December 1943. After 1944 became occasional in Karachi and Lower Sind and was not seen again in Upper Sind.

28. Precis almana almana L. The Peacock Pansy.

29. Vanessa cardui L. The Painted Lady.

Common. Often numerous.

30. Atella phalanta Drury. The Common Leopard.

Karachi only. Very rare. Swinhoe took one in July, 1882, and I took one in Sept. 1942.

31. Tarucus callinara But. The Spotted Pierrot.

The blue pierrots are found in most months of the year. 34 specimens taken in the Hyderabad and Karachi Districts between Sept. 1938 and June 1939, were identified by Brigadier Evans, through A. Jones, as follows: *callinara 5, nigra 21, alteratus 6, nara 1, theophrastus indica 1.* 

32. Tarucus theoprastus indica. The Pointed Pierrot.

33. Tarucus extricatus But. The Rounded Pierrot.

34. Tarucus alteratus M. The Rusty Pierrot.

35. Tarucus nigra BB. The Spotted Pierrot.

36. Tarucus nara Koll. The Striped Pierrot.

37. Syntarucus plinius F. The Zebra Blue.

August to November. Not common.

38. Azanus ubaldus Cr. The Bright Babul Blue.

Very numerous around babul trees from June to November.

39. Azanus uranus But. The Dull Babul Blue.

Is greatly outnumbered by A. ubaldus.

40. Zizeeria trochilus trochilus Freyer. The Grass Jewel.

41. Zizeeria trochilus putli<sup>1</sup> Koll. The Grass Jewel.

The two Grass Jewels are found in the vicinity of Karachi, generally in the grasses along the coastline.

42. Zizeeria lysimon Hub. The Dark Grass Blue. Very common all the year round.

43. Euchrysops contracta contracta But. The Small Cupid. Very common in all months of the year.

44. Euchrysops pandava minuta. The Plains Cupid.

Scarce. Possibly often overlooked. Several taken in Nov. and Dec. 1943 near Umerkot.

<sup>1</sup> Mr. M. A. Wynter-Blyth questions this record since this is a South Indian butterfly.—Eps.

45. Catachrysops strabo F. The Forget-me-not. Locally common Nov, to March.

46. Lampides boeticus L. The Peablue. Common.

**47.** Apharitis acamas hypargyrus But. The Tawny Silverline. Small broods met occasionally. Rare.

48. Spindasis elima elima M. The Scarce Shot Silverline.

Not observed by me, but Swinhoe states 'Several taken in the Hubb River by Capt. Becher in Sept. 1885.'

49. Virachola isocrates F. The Common Guava Blue.

Karachi. Rare. Rae found it in one particular orchard in Karachi in 1935 and I took it in June, 1944.

50. Hasora alexis alexis F. The Common Banded Awl.

Karachi. Very rare. Swinhoe records one in July 1882 and I noted one in July 1944 after abnormal rains.

51. Badamia exclamationis Fab. The Brown Awl.

Karachi. Very rare. July 1944, and one in June 1885 by Swinhoe.
52. Gomalia elma litoralis Swin. The African Marbled Skipper.
Karachi. Recorded in July 1879 by Swinhoe.

Randon. Recorded in July 1075 by Swintoo.

53. Syrichtus galba F. The Indian Skipper.

Found locally throughout Sind. Not common.

54. Syrichtus evanidus But. The Sind Skipper. Rare.

55. Suastus gremius gremius F. The Indian Palm Bob. Very rare. A few taken in Karachi in Sept. and Oct. 1943.

56. Baoris mathias mathias F. The Small Branded Swift. This and *B. m. thrax* (below) are common in all seasons.

57. Baoris mathias thrax Hub.

58. Baoris bevani bevani M. Bevan's Swift.

Karachi. Recorded in Oct. 1885 and July 1887 by Swinhoe.

59. Gegenes nostrodamus karsana M. The Dingy Swift. Not rare but often overlooked.